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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,728	07/30/2004	Chun-Chung Lai		4727

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AKKU POWER LIMITED COMPANY
2F-4, NO. 148, SEC. 4, CHUNG HSIAO EAST ROAD
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EXAMINER

BOATENG, ALEXIS ASIEDUA

ART UNIT PAPER NUMBER

2838

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/710,728

Applicant(s)

LAI ET AL.

Examiner

Alexis Boateng

Art Unit

2838

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kfoury (U.S. 6,049,192).

Regarding claim 1, Kfoury discloses wherein a battery charger capable of charging both lithium battery and nickel-metal hydride battery, comprising:

a slot, for receiving a battery to be charged, wherein said battery is a lithium battery or a nickel-metal hydride battery (figure 1 item 108; column 7 lines 5 – 10);

a microcontroller, comprising an identifying module (figure 15 item 1500; column 6 lines 62 – 65) and a charging module (figure 15 item 1504), wherein said identifying module is adapted for identifying a specification of said battery in said slot (column 6 line 62 – column 7 line 18); and

a pulse width modulator (column 6 lines 49 – 65), for charging said battery in said slot, said pulse width modulator and said slot connected to said microcontroller, wherein said charging module of said microcontroller is adapted for controlling said pulse width modulator for charging said battery (column 6 lines 49 – 65; column 7 lines 46 – 59).

Regarding claim 2, Kfoury discloses wherein said pulse width modulator is connected to a power supplier (figure 15 item 1552 (which comprises a PWM) connected to item 1554; column 7 lines 30 – 54, note: 1542 is 1552 in figure 15)).

3. Claims 5 - 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Helton (U.S. 6,236,186).

Regarding claim 5, Helton discloses wherein a method of a battery using a multifunctional battery charger, comprising:

a) inserting battery into a slot of said multifunctional battery charger (column 8 line 18 – column 8 line 39);

b) using a pulse width modulator to charge the battery in said slot (column 11 lines 13 - 19);

c) using an identifying module (figure 1 item 74) of a microcontroller to check whether a charged voltage has reached a preset charging level, wherein if the charge voltage has not reached to the preset charging level, the method proceeds to step (d) (column 4 lines 39 – 61; column 7 lines 1 – 40);

d) using an identifying module (figure 1 item 74) of a microcontroller to check whether a charged current has changed, wherein if the charged current has not changed, the method proceeds to step (e);

e) using said identifying module of said microcontroller to check whether a negative delta voltage ($-\Delta V$) has occurred, wherein if the negative data voltage ($-\Delta V$) has occurred, the method proceeds to step (f) (column 11 lines 1 – 12: system detects a lowered voltage);

f) using nickel-metal hydride battery charging module to control said pulse width modulator for charging said battery (column 1 lines 29 – 35; column 2 lines 30 – 33; column 11 lines 17 – 32: the system can be implemented with any type of battery, thus the charging system can be used with a nickel-metal hydride battery).

Regarding claim 6, Helton discloses the method of charging a battery using a multifunctional battery charger wherein if the charged voltage has reached to the preset charging level, the method proceeds to step (g), wherein a lithium battery charging module is used to control said pulse width modulator for charging said battery (column 11 lines 13 – 42).

Regarding claim 7, Helton discloses the method of charging a battery using a multifunctional battery charger wherein if the charged current has changed, the method proceeds to step (g), wherein a lithium battery charging module is used to control said pulse width modulator for charging said battery (column 11 lines 13 – 42).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kfoury (U.S. 6,049,192) in view of Kates (U.S. 6,337,557).

Regarding claim 3, Kfoury does not disclose the invention as claimed. Kates discloses in column 9 line 26 – column 10 line 8 wherein the battery recognition parameter is set a maximum voltage determined via the identification circuitry. At the time of invention, it would have been obvious to person of ordinary skill to modify the Kfoury system with the Kates system so that the voltage stays within defined maximum boundaries.

Regarding claim 4, Kfoury does not disclose the invention as claimed. Kates discloses wherein the identification circuitry and be an application specific integrated circuit. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Kfoury system with the Kates system so that the overall performance of the charging system is improved.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB


KARL EASTHOM
SUPERVISORY PATENT EXAMINER